11-0509-006
May 25, 2018

Tighe&Bond
Engineers | Environmental Specialists

Mr. David Genovese
Baywater Corbin Partners, LLC
1019 Boston Post Road
Darien, CT 06820

Re: **Corbin Drive Development**
Parking Demand and Parking Management Plan
Darien, Connecticut

Dear Mr. Genovese:

Tighe & Bond has prepared the parking analysis to estimate the future parking demands associated with the proposed mixed-use Corbin Drive development and to assess the adequacy of the future on-site parking supply to support these future demands. In order to determine the appropriate parking requirements for mixed-use Corbin Drive development, Tighe & Bond reviewed parking demand data from Town of Darien Parking Regulations, Downtown Darien Parking Management Plan, as well as statistical data published by nationally recognized organizations focused on individual-use parking demand and mixed-use shared parking demand. Finally, Tighe & Bond developed a parking management plan to outline the provisions of shared parking arrangement for the proposed Corbin Drive site.

Proposed Parking Supply

The proposed Corbin Drive development will replace the existing 52,579 square feet of retail spaces and 45,961 square feet of office spaces on the site to include 117 residential units, 81,200 square feet of office, 81,730 square feet of retail and 16,910 square feet of quality restaurant space. The parking on-site will be reconfigured associated with the proposed development. The proposed parking spaces and locations are illustrated on Figure 1-A through 1-C. As shown, there will be 240 parking spaces provided in the underground parking facility below Building G, where 122 parking spaces will be reserved exclusively for residential parking. In addition, the site will provide 64 parking spaces in the underground parking facility below Building H, 308 parking spaces within on/above grade parking building E, as well as 132 surface parking spaces on the site. Furthermore, along the site frontage, there will be 26 on-street parking spaces provided on Boston Post Road and 35 on-street parking spaces provided on Corbin Drive, respectively. Following the site development, a total parking supply of 805 spaces including 22 handicap accessible spaces will be provided. As mentioned, 122 parking spaces below Building G will be reserved for residential parking, while the remaining parking spaces will be shared between the mixed uses proposed on-site.

Darien Parking Regulations

The future parking requirements based on Town of Darien parking regulations were reviewed and summarized in Table 1. As shown on Table 1, the current parking regulations will require 1,401 parking spaces for the proposed development plan. The Town may allow a reduction in parking required where different uses share the parking facilities. As mentioned in Section 905 of the regulations, the Town may approve the reservation of on-site parking areas for residential tenants, provided that the remaining on-site parking shall be sufficient to meet the parking demand of the related residential parking uses and non-residential uses covered by a joint parking arrangement.

Table 1
Parking Requirements - Darien Zoning Regulation

Proposed Development Plan Use	Size	Darien Parking Requirements				Parking Required
Residential	117 units	2.5	spaces per	1	unit	293
Office	81,200 s.f.	1.0	space per	250	s.f.	325
Retail	81,730 s.f.	1.0	space per	150	s.f.	545
Restaurant	16,910 s.f.					
- Non-Bar Area	15,219 s.f.	1.0	space per	100	s.f.	153
- Bar Area	1,691 s.f.	1.0	space per	20	s.f.	85
					Total Parking Requirement =	**1401**

Source: Darien Zoning Regulations Section 900.

Downtown Darien Parking Management Plan

The Town of Darien retained Nelson Nygaard and Fitzgerald & Halliday to assess parking demand in Downtown Darien and create a Downtown Darien Parking Management Plan in 2015. As part of the study, the consultant team developed a shared parking model to assist in projecting parking demand for new land uses in the mixed-use, urban setting of downtown Darien. The shared parking model predicts the combined peak demand from all uses within a parking supply that is effectively shared. These recommended parking ratios, along with a projection of the proposed parking demand based upon these ratios are summarized in Table 2. As shown on the table, the Downtown Darien shared parking demand model recommends 628 parking spaces, well below the proposed parking supply of 805 spaces.

Table 2
Parking Requirements - Darien Downtown Parking Management Plan

Proposed Development Plan Use	Size	Downtown Parking Management Plan Shared Parking Model				Parking Required
Residential	117 units	1.0	spaces per	1	unit	117
Office	81,200 s.f.	1.0	space per	500	s.f.	163
Retail	81,730 s.f.	1.0	space per	333	s.f.	246
Restaurant	16,910 s.f.	1.0	space per	167	s.f.	102
					Parking Required =	**628**
					Parking Supplied =	**805**
					Parking Surplus =	**177**

Source: Darien Downtown Parking Management Plan Shared Parking Model, Nelson Nygard, Nov. 2015

National ITE Parking Generation and ULI Shared Parking

Furthermore, to estimate the future parking demands that will be associated with the proposed site development, national industry data published in ITE *Parking Generation* (4th Edition, 2010) and Urban Land Institute (ULI) *Shared Parking* (2nd Edition, 2005) were review and summarized in Table 3 and 4 for weekdays and weekends, respectively. ITE *Parking Generation* provides parking ratios developed based upon larger number of study sites and therefore is nationally recognized for providing parking ratios for individual uses, while ULI *Shared Parking* provides more detailed time-of-day variations to estimate shared parking demands for mixed-use developments. As shown on Table 3, the parking of the proposed development will peak around 1:00 PM during weekdays with a total parking demand of 766 spaces. During weekends, as shown on Table 4, the parking of the proposed development will peak around 7:00 PM with a total parking demand of 562 spaces. The proposed parking supply of 805 spaces for the development site is expected to be adequate for the parking demand.

It should be noted that with mixed-use development there is usually some parking demand that will be internally captured by motorists parking once and walking to multiple destinations. Furthermore, the fact that the site is located within walking distance to Darien Metro-North Train Station may attract residents to the residential component of the development or shoppers to the commercial component of the development that might not own automobiles, and would further reduce the future parking demands generated by the site.

Table 3
Shared Parking Demand - Weekdays

Proposed Development Plan Use	Size	ITE Parking Generation Rates				Parking Required
Residential	117 units	1.20	spaces per	1	unit	141
		Reserved Residential Parking Spaces				122
		Non-Reserved Residential Parking Spaces				19
Office	81,200 s.f.	2.47	spaces per	1,000	s.f.	201
Retail	81,730 s.f.	2.94	spaces per	1,000	s.f.	241
Restaurant	16,910 s.f.	16.41	spaces per	1,000	s.f.	278

Land Use	ULI Shared Parking Demand Time of Day										
	10:00 AM	11:00 PM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Reserved Residential	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	122	**122**	**122**	**122**	**122**	**122**	**122**	**122**	**122**	**122**	**122**
Non-Reserved Residential	75%	70%	65%	70%	70%	70%	75%	85%	90%	97%	98%
	14	**13**	**12**	**13**	**13**	**13**	**14**	**16**	**17**	**18**	**19**
Office	100%	100%	90%	90%	100%	100%	90%	50%	25%	10%	7%
	201	**201**	**181**	**181**	**201**	**201**	**181**	**101**	**50**	**20**	**14**
Retail	65%	85%	95%	100%	95%	90%	90%	95%	95%	95%	80%
	157	**205**	**229**	**241**	**229**	**217**	**217**	**229**	**229**	**229**	**193**
Restaurant	15%	40%	75%	75%	65%	40%	50%	75%	95%	100%	100%
	42	**111**	**209**	**209**	**181**	**111**	**139**	**209**	**264**	**278**	**278**
Parking Required =	**536**	**652**	**753**	**766**	**746**	**664**	**673**	**677**	**682**	**667**	**626**
Parking Supplied =	**805**										
Parking Surplus =	**39**										

Source: ITE Parking Generation, 4th Edition, 2010; ULI Shared Parking, 2nd Edition, 2005

Table 4
Shared Parking Demand - Weekends

Proposed Development Plan Use	Size	ITE Parking Generation Rates				Parking Required
Residential	117 units	1.03	spaces per	1	unit	121
		Reserved Residential Parking Spaces				122
		Non-Reserved Residential Parking Spaces				0
Office	81,200 s.f.	0.00	spaces per	1,000	s.f.	0
Retail	81,730 s.f.	2.87	spaces per	1,000	s.f.	235
Restaurant	16,910 s.f.	16.40	spaces per	1,000	s.f.	278

Land Use	ULI Shared Parking Demand Time of Day										
	10:00 AM	11:00 PM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Reserved Residential	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	122	**122**	**122**	**122**	**122**	**122**	**122**	**122**	**122**	**122**	**122**
Non-Reserved Residential	75%	70%	65%	70%	70%	70%	75%	85%	90%	97%	98%
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Office	90%	100%	90%	80%	60%	40%	20%	10%	5%	0%	0%
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Retail	50%	65%	80%	90%	100%	100%	95%	90%	80%	75%	65%
	118	**153**	**188**	**212**	**235**	**235**	**223**	**212**	**188**	**176**	**153**
Restaurant	15%	15%	50%	55%	45%	45%	45%	60%	90%	95%	100%
	42	**42**	**139**	**153**	**125**	**125**	**125**	**167**	**250**	**264**	**278**
Parking Required =	**282**	**317**	**449**	**487**	**482**	**482**	**470**	**501**	**560**	**562**	**553**
Parking Supplied =	**805**										
Parking Surplus =	**243**										

Source: ITE Parking Generation, 4th Edition, 2010; ULI Shared Parking, 2nd Edition, 2005

Parking Management Plan

The proposed Corbin Drive development is located in downtown Darien within a quarter-mile walking distance of Darien Metho-North Train Station. The location of the site is illustrated on Figure 2. Continuous sidewalks are present in vicinity of the site to provide pedestrian connectivity from Downtown Darien, Darien Metro-North Rail Station, Corbin Drive Site, and adjacent residential neighborhoods, as illustrated on Figure 3. In addition, Connecticut Transit (CT Transit) Route 344 provides weekday and Saturday service connecting Darien Railroad Station to Noroton Heights Railroad Station, Glenbrook Railroad Station, and Stamford Transportation Center with a bus stop on West Avenue at Darien Train Station. CT Transit Route 341 provides weekday, Saturday and Sunday service connecting Darien Downtown to Stamford Transportation Center and Norwalk Wheels Hub with bus stops on Boston Post Road at Leroy Avenue, Corbin Drive and Center Street. The public transportation of the area adjacent to the site is illustrated on Figure 4. The proximity to these services in the site area inevitably reduce car ownership of the residents and reduce parking demand of residents as well as visitors.

A parking management plan has been developed for the proposed Corbin Drive development to establish the parking operations and management procedures to demonstrate how the parking operations will be managed to meet the expected demand. The following parking management plan is prepared for the proposed site.

Site Residential Parking Management: The project will provide a total of 122 controlled secure parking spaces exclusively for the residents of the development. These parking spaces will be managed for each unit within the reserved supply. Units will be able to waive their parking availability if they do not own a vehicle or potentially purchase an additional parking space should one be available. This active management will ensure that residents will have adequate parking supply on the site.

Guest Parking: If excess parking capacity is available for visitors during the peak parking periods, building management may allow visitors to park on site in spaces that have been dedicated for visitor parking or are assigned to the unit being visited. To the extent such spaces do not exist, guests/visitors who arrive by car should be instructed by their hosts to park within the site.

Shared Parking: The office and retail/restaurant uses proposed on the site are compatible in a shared parking environment as they have some non-concurrent peak parking demands. During weekends, office parking demand is significantly reduced, which would allow for additional supply for retail/restaurant uses. The appropriate markings, signage and enforcement should be in place to manage the shared parking spaces.

Shared Vehicles: The owner of the site will consider at least two shared vehicle (i.e. Zipcar) parking space, if the demand exists. However, parking credit for providing such vehicle(s) should be applied. The owner of the property shall maintain the shared vehicle(s) for the exclusive use by the residents.

Electric Vehicle Charging Stations: Provisions for up to two vehicle charging stations for electric vehicles should be considered for the site.

Bicycle Storage and Sharing: To encourage multi-modal travel, bicycle storage areas will be provided within the development to accommodate thirty (30) at-grade bike racks and sixty (60) secure bike racks at the basement level of the parking garage for the residents.

Uber Parking: It has been widely recognized that ride-hailing companies like Uber are changing transportation choices and impacting parking demand, particular at urban centers. Strong markets for ride-hailing services are found in dense urban areas with a bigger pool of potential customers. The Uber drop-off and pick-up locations should be created on the

site. The appropriate signage should be in place to management the Uber drop-off and pick-up spaces.

Loading

In designing the project, Baywater has incorporated two loading docks at the rear of the building proposed for the site of 1120 Boston Post Road. One of the loading docks would serve the anchor retailer envisioned for the project. The other loading dock proposed would serve the US Postal Service, for whom we have designed a retail-only storefront totaling approximately 2,500 square feet.

In today's much-changed world of retail, most stores, both local and national, rely primarily upon quick shipping via FedEx, UPS or the US Postal Service. This is especially true for the smaller retailers such as Kirby & Company, Morley, Wiggles & Giggles and Helen Ainson, with whom we currently work in the vicinity of the proposed development. As a result, the need for dedicated loading docks for small retailers has been virtually eliminated. Our experience at 1020 Boston Post Road is that the loading space is almost never used, and in that building we have two restaurants, one ice cream store, a day spa and a women's clothing retailer.

For the restaurant operators, who take frequent deliveries from 18 wheelers or box trucks, the situation is different. Given that we will be proposing to lease to several restaurants and artisanal food purveyors, we acknowledge the need to manage loading and unloading carefully. These trips can be scheduled, and set for earlier in the morning, as is done by Ten Twenty Post and Estia's, as examples. Further supporting this approach, note that there is no loading area in the vicinity of Bodega or UCBC, which abut the Center Street Municipal Parking Lot. We have designed the site plan for the project with two areas which can serve as loading/unloading areas. The Uber drop-off lane behind the office building will be gated with the gate closed in the morning during the week and remotely opened for delivery drivers by Baywater staff. The gate will be opened from 12 pm for visitors to the property, and through the evening for Uber drop-off and pick-up. Additionally, the interior street, Road "B", will have removable bollards which will allow us to close the street to vehicular traffic on nights and weekends, or for special events such as a Farmers Market, Art Show, Car Show, among others. We intend to close Road "B" by using the bollards in the evening after the restaurants close, and re-open Road "B" from 10 or 11 am each weekday, which would enable us to also take deliveries closer to the restaurants located along the Boston Post Road or Corbin Drive.

Parking Operation

Initially Baywater's plan is to provide free parking for retail and office use. To support the operation of a fully automated facility, Baywater proposes to incorporate Automatic Vehicle Identification (AVI) technology to enforce parking.

<u>Completely Free Parking</u>

- Employees and residents will gravitate to covered parking and will group close to the most convenient elevators. Some employees may occupy the on-street spaces nearest to their places of work.
- Shoppers, diners and visitors will gravitate to surface spaces, except in bad weather. Visitors to the proposed anchor retail store will gravitate to the above ground garage.
- To assist parkers in identifying where spaces are available, electronic signage displaying the number of open spaces in the two underground garages and

the above-ground garage may be displayed at the Post Road intersections with site driveway and Corbin Drive and at the intersection of Corbin Drive with Old Kings Highway. In addition, electronic signage located at the entrance to the above-ground garage may display the number of available spaces on each level.

- Issues will be resolved by Management when parkers are prohibited from using specific elevators because they deliver to locked building lobbies, or because, having exited via a building lobby, the lobby is locked upon return and there is no obvious return to the garage.

Free Parking Controlled by Signage

- If the potential issues associated with Completely Free Parking arise to a level of concern, signage to identify time limits or preferred users will be employed.
- Common on-street parking limit signage without enforcement powers may be used.
- Signage restricting garage access to residents and employees, with or without time restrictions, may be used.
- Areas reserved for residents within a garage may be identified by signage on individual spaces, or signage identifying the reserved area (e.g. residents only beyond here)
- Signage warning users of the times of availability of garage elevators may be used where specific elevators deliver to locked building lobbies.

Free Parking With Card Access to Elevators

- Garage elevator lobbies will be equipped with card readers to reserve access to pre-authorized users.
- If card readers are introduced, prominent signage will be necessary on the garage floors and at the surface to identify elevators available to the public.
- Once card readers are introduced, a system to manage the issuance and cancellation of access cards will be provided. This would require central computer equipment and dedicated software, and a staff function.

Free or Paid Parking with Access Control for Residents and Employees

- Access control for residents and employees necessitates inbound and outbound barrier gates to be installed at the boundaries of the controlled areas, and physical restrictions on the ability to bypass the gates.
- If residents are to have access controlled reserved areas within a larger garage, inbound and outbound barrier gates would be installed at the boundaries of the reserved areas, with physical restrictions on the ability to bypass the gates.
- Gate locations would require adequate queuing space on the approaches.
- A system to manage the issuance and cancellation of access cards will be developed.

- If paid parking is decided upon, the system to manage the issuance and cancellation of cards or tags would be expanded to account for the receipt of payments and their deposit to the appropriate bank account.

Conclusion

Based on our review, it is our opinion that the proposed Corbin Drive Development site has sufficient parking capacity to accommodate the expected parking demand of the proposed development. Furthermore, the outlined parking management plan demonstrates how the parking operations will be managed to ensure that adequate parking supply will be provided to all uses on the site.

Sincerely,

TIGHE & BOND, INC.

Jianhong Wang, P.E.
Senior Engineer

John W. Block, P.E., L.S.
Senior Vice President

Enclosures:
Figure 1-A, 1-B & 1-C – Site Parking Plan
Figure 2 – Location Map
Figure 3 – Pedestrians Connectivity
Figure 4 – Public Transportation

J:\B\B0509 Baywater\006- Corbin Schematic Design\Parking\2018_05-24 - Corbin Drive Parking Analysis and Management Plan.doc

RESERVED RESIDENTIAL SPACES:	122
ACCESIBLE SPACES:	14

BELOW GRADE PARKING

BUILDING G:	240
BUILDING H:	64
TOTAL:	304

ON/ABOVE GRADE PARKING

BUILDING G:	75
BUILDING E:	308
BUILDING K:	6
BUILDING F:	12
BUILDING I:	7
INTERNAL STREETS:	32
POST & CORBIN:	61
TOTAL:	501
PARKING TOTAL:	**805**
TOTAL ACCESSIBLE:	22

No. | Note | Date
Revision Schedule

BEINFIELD ARCHITECTURE

1 Marshall Street
Ste 202
S. Norwalk / CT / 06854

T 203 838 5789
F 203 857 0046
WWW.BEINFIELDARCHITECTURE.COM

NORTH

SEAL

PROGRESS
05/04/2018

PROJECT
CORBIN BLOCK

Corbin Drive & Post Road
Darien CT

DWG TITLE
Below Grade Parking Diagram

JOB NO. -
DATE 04-25-2018
SCALE 1" = 40'-0"
DRAWN BY Author

FIGURE-1A

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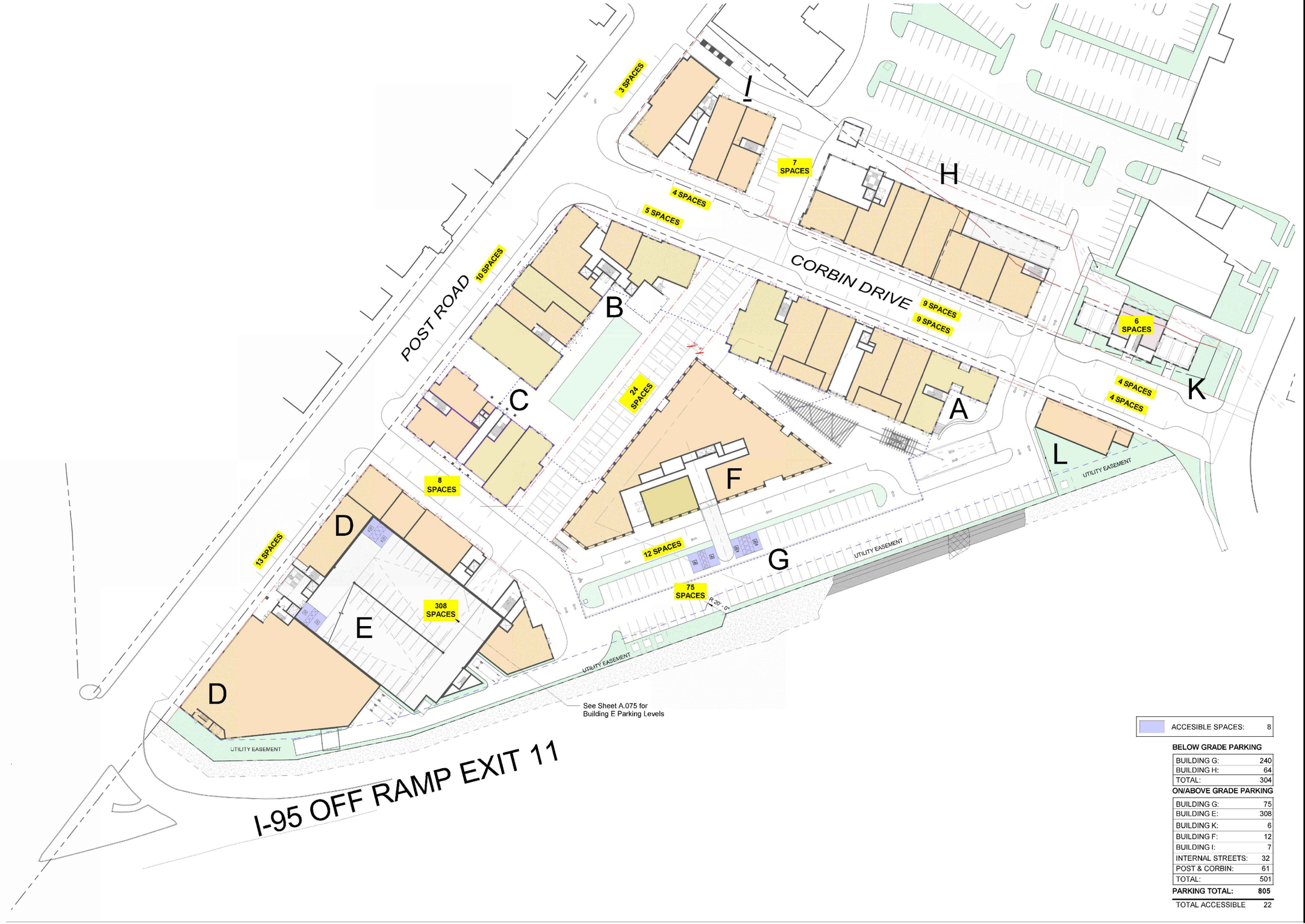


ACCESIBLE SPACES:	8

BELOW GRADE PARKING

BUILDING G:	240
BUILDING H:	64
TOTAL:	304

ON/ABOVE GRADE PARKING

BUILDING G:	75
BUILDING E:	308
BUILDING K:	6
BUILDING F:	12
BUILDING I:	7
INTERNAL STREETS:	32
POST & CORBIN:	61
TOTAL:	501
PARKING TOTAL:	**805**
TOTAL ACCESSIBLE	22

No. Revision Schedule Date

N

BEINFIELD ARCHITECTURE

1 Marshall Street
Ste 202
S. Norwalk / CT / 06854

T 203 838 5789
F 203 869 0046
www.beinfieldarchitecture.com

N

Seal

PROGRESS
05/04/2018

Project
CORBIN BLOCK

Corbin Drive & Post Road
Darien CT

Dwg Title
On Grade Parking Diagram

Job No. -

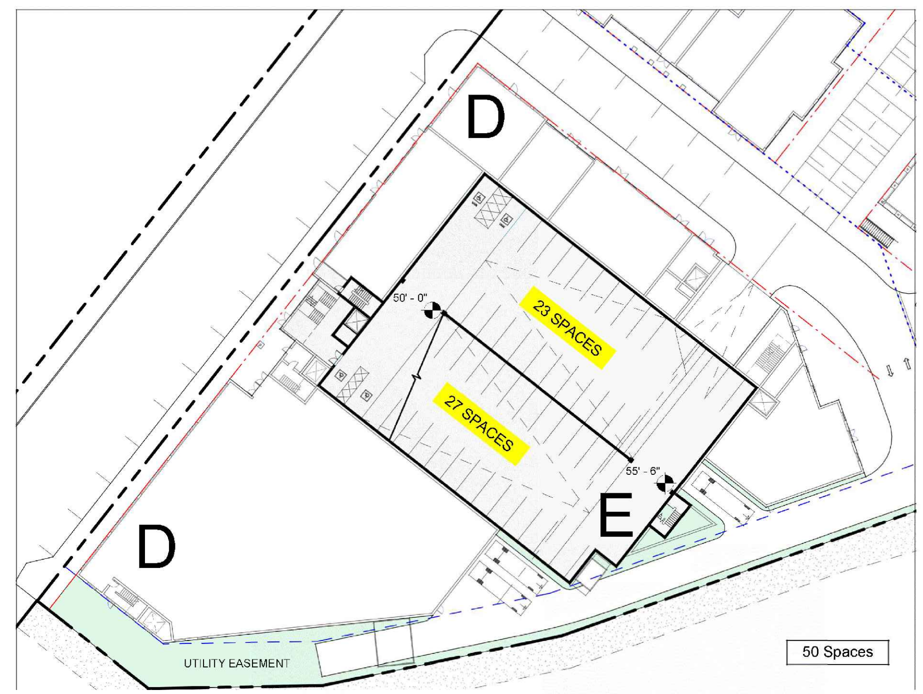
Date 04-25-2018

Scale 1" = 40'-0"

Drawn By Author

FIGURE-1B

1 Building E - Level 0
1" = 40'-0"



2 Building E - Level 1 (Grade)
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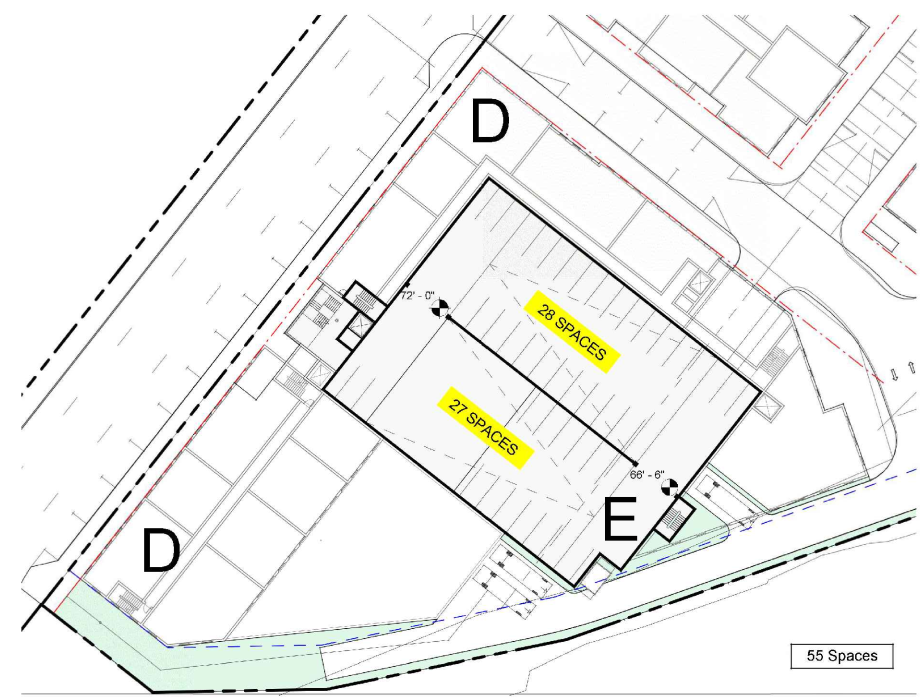

3 Building E - Level 2
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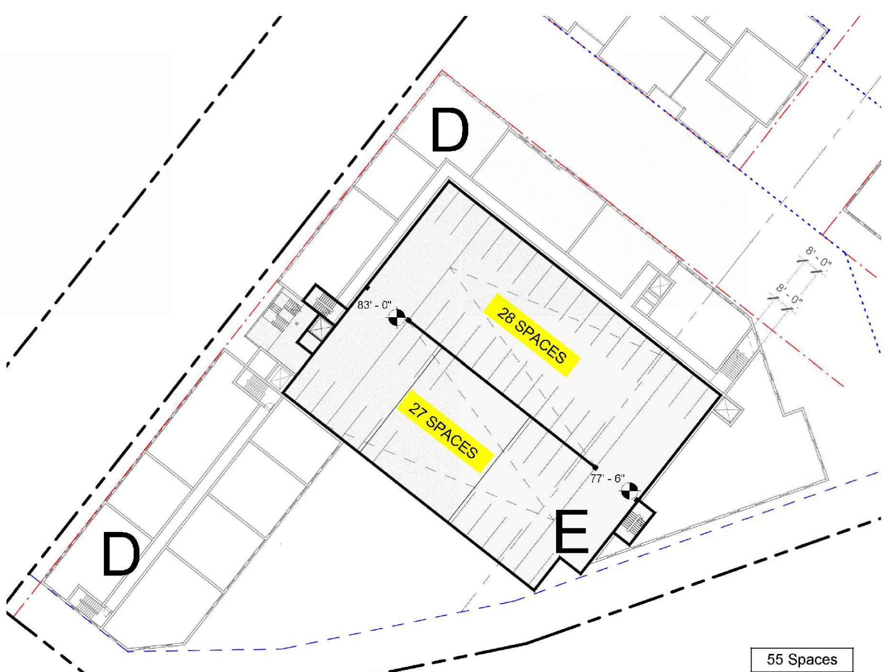

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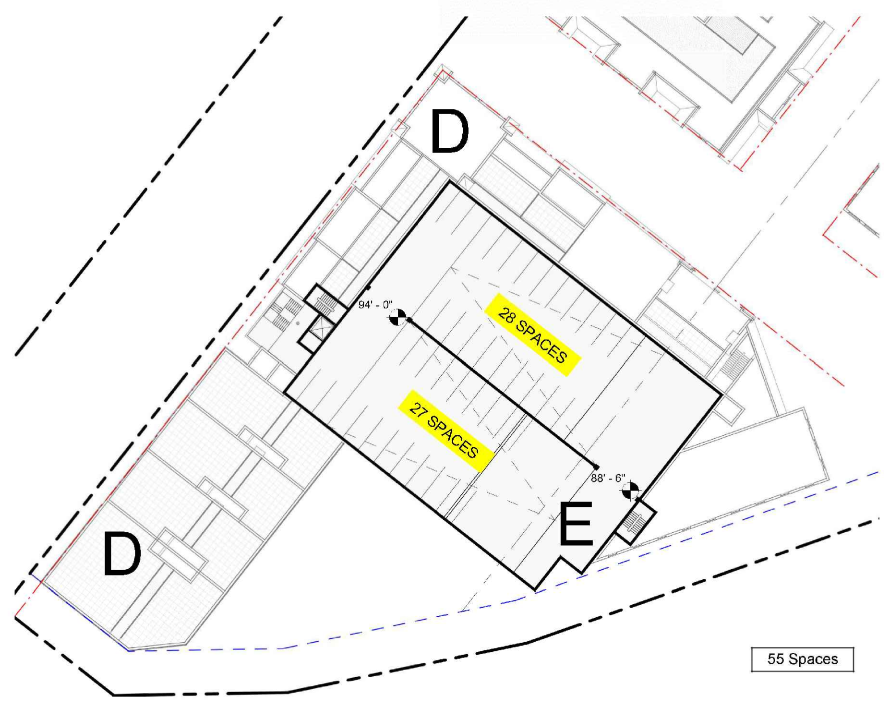

5 Building E - Level 4
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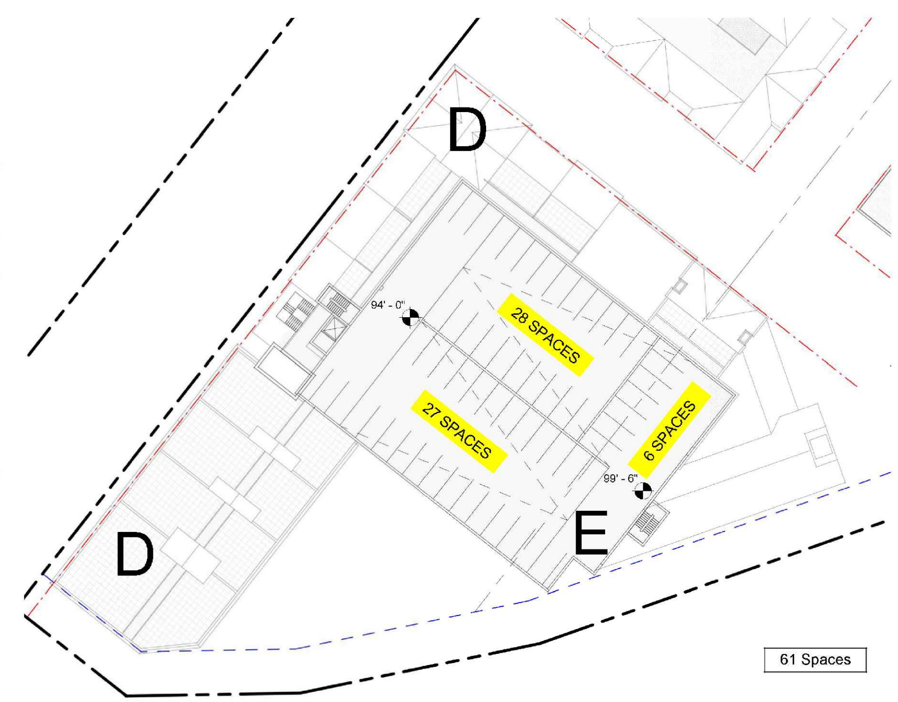

6 Building E - Level 5
1" = 40'-0"

Building E Parking	
Level 0	32
Level 1	50
Level 2	55
Level 3	55
Level 4	55
Level 5	61
Total	308

No. | Note | Date

Revision Schedule

BEINFIELD ARCHITECTURE

1 Marshall Street
Ste 202
S. Norwalk / CT / 06854

T 203 838 5789
F 203 857 0046
www.beinfieldarchitecture.com

NORTH

N

SEAL

PROGRESS
05/04/2018

PROJECT
CORBIN BLOCK

Corbin Drive & Post Road
Darien CT

DWG TITLE
Building E Parking
Diagram

JOB NO.
-

DATE
04-25-2018

SCALE
1" = 40'-0"

DRAWN BY
Author

FIGURE-1C

5/16/2018 10:34:37 AM \\BARCTFS01\RedirectedUsers\NathanD\Documents\CB - Site - (Current)_NathanD.rvt

SCALE IN FEET

0 500' 1000'

GRAPHIC SCALE

CORBIN DRIVE
DARIEN, CONNECTICUT

LOCATION MAP

DATE:	5/23/2018
SCALE:	1" = 500'
FIGURE	02

Tighe&Bond
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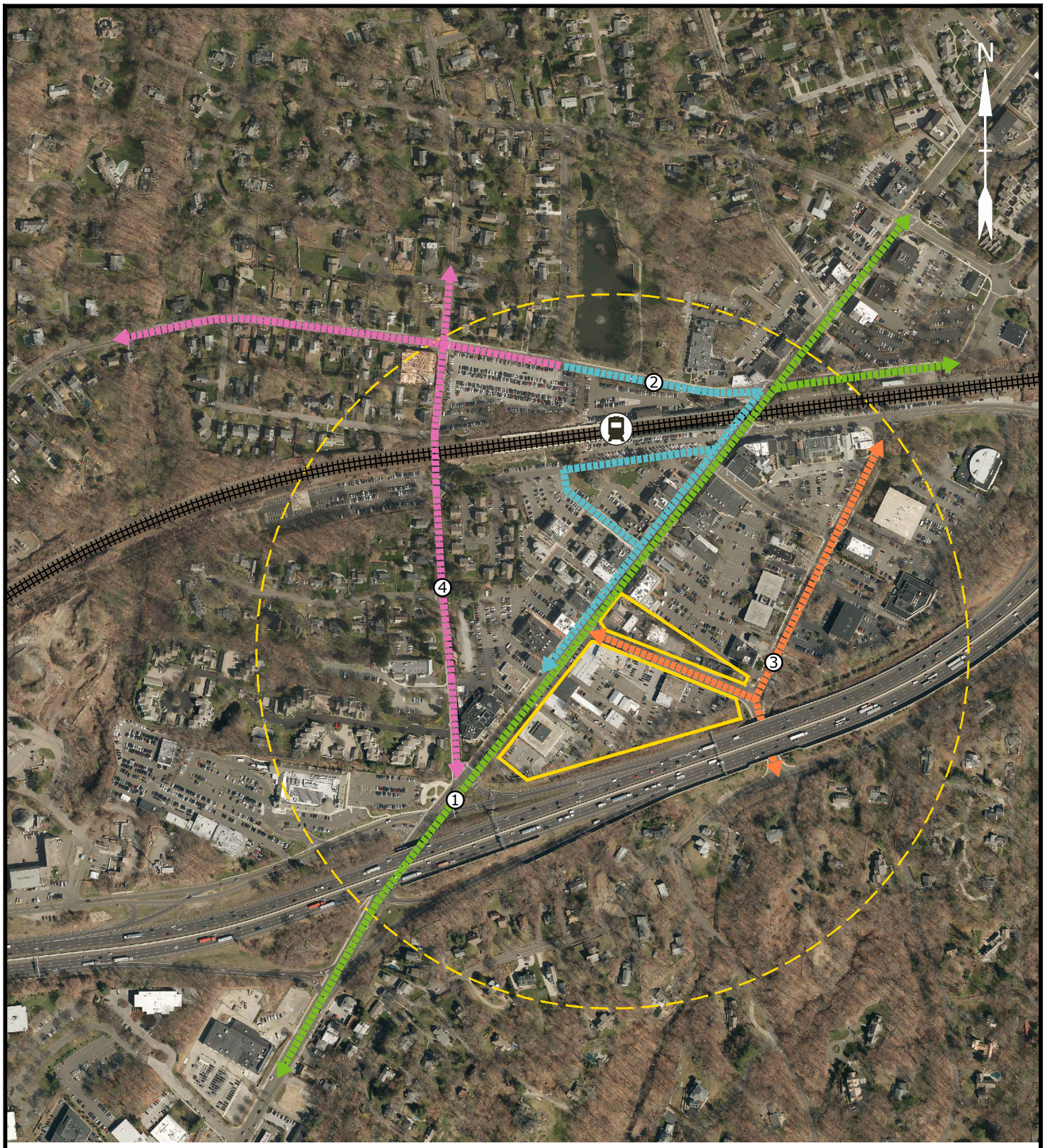
May 23, 2018-2:56pm Plotted By: ADM
Tighe & Bond, Inc. C:\Users\adm\appdata\local\temp\AcPublish_5320\FIGURE XX.dwg



① ACCESS FROM DOWNTOWN DARIEN

② ACCESS FROM DARIEN METRO-NORTH RAIL STATION

③ ACCESS FROM CORBIN DRIVE SITE

④ ACCESS FROM RESIDENTIAL NEIGHBORHOOD

SCALE IN FEET

0 500' 1000'

GRAPHIC SCALE

CORBIN DRIVE
DARIEN, CONNECTICUT

PEDESTRIAN CONNECTIVITY

DATE:	5/23/2018
SCALE:	1" = 500'
FIGURE	03

Tighe&Bond
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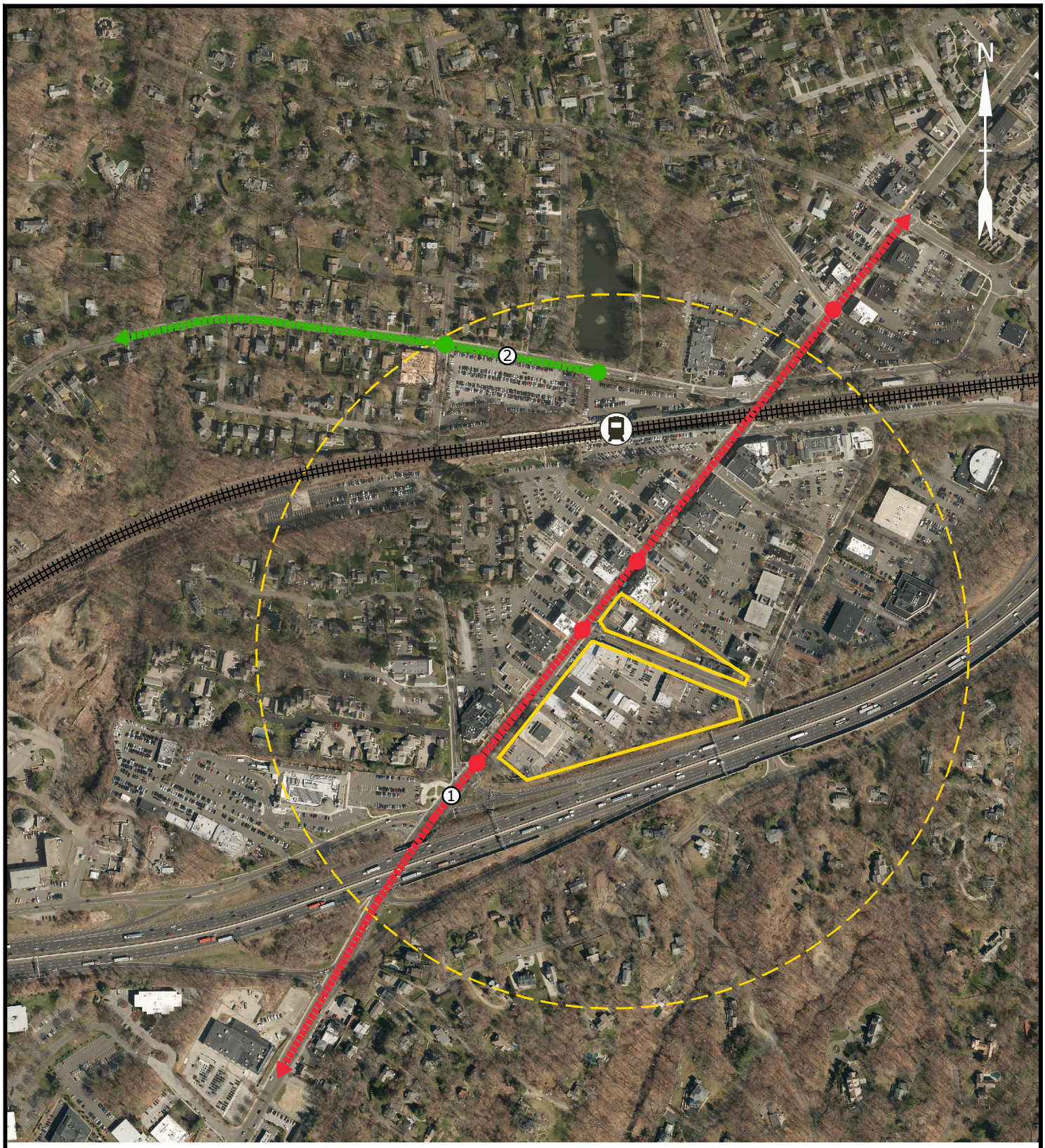
May 23, 2018-2:56pm Plotted By: ADM
Tighe & Bond, Inc. C:\Users\adm\appdata\local\temp\AcPublish_5320\FIGURE XX.dwg



DARIEN METRO-NORTH RAILROAD

CT TRANSIT #341

CT TRANSIT #344

SCALE IN FEET

0 500' 1000'

GRAPHIC SCALE

CORBIN DRIVE

DARIEN, CONNECTICUT

PUBLIC TRANSPORTATION

DATE:	5/23/2018
SCALE:	1" = 500'
FIGURE	04

Tighe&Bond

Engineers | Environmental Specialists

May 23, 2018-2:56pm Plotted By: ADM
Tighe & Bond, Inc. C:\Users\adm\appdata\local\temp\AcPublish_5320\FIGURE XX.dwg